

## Summary

## Front-End Circuit For Wireless Transmission Systems

5           A functional block of a front-end circuit for a communication device, which is employed for multi-band and/or multi-mode operation, is proposed. By positioning, according to this invention, a pin diode switch in one of the parallel signal paths instead of positioning it on the input side before separating the signal paths, it is possible to do without an impedance transformation network on the input side and to thus reduce the  
10           signal loss and the space requirement of the circuit. In a further configuration, the signal paths preferably associated with the adjacent frequency bands are combined on the output side, whereby the further processing of the signals corresponding to the different frequency bands takes place in one path. This for example allows a chip set designed for  $(n - 1)$  frequency bands to be used in a transmission system designed for  $n$  bands. Another  
15           embodiment of this invention enables monitoring of the received signal of a system even during operation of the other mode in a multi-mode system. Stable electrical properties of the circuit can be achieved according to this invention through integration of all components of the front-end circuit in one module.

20           Figure 2